

REMARKS/ARGUMENTS

Claims 15-18 and 22-51 are active.

Claims 15, 16 and 18 have been amended to in accord with the specification on page 4, line 29-30

Claims 46-48 find support on page 4, lines 28-31 and page 6, lines 16-21.

No new matter is added.

The claims of this application are directed to a chemically treated glass that has the chemical, alkali metal ion, permeating to a depth of at least 100 μm having a specified surface stress and strain point. In the Official Action, the Examiner has maintained that the claims would have been obvious in view of Forker and Craver. The Examiner contends that Craver's suggestion to use strengthened glass would lead one to use Forker's glass and that contrary to the arguments we submitted in our last reply, Forker is not only limited to automotive applications.

Applicants thank the Examiner for the courtesy of discussing this application with the undersigned on October 21, 2010. During this meeting, it was argued that the pending claims would have been obvious because one would not have used Forker's glass in Craver as alleged in the rejection because Forker's glass is not a conventional glass as called for by Craver but one rather specially designed for automotive applications. In addition, the present application demonstrates improved performance of the claimed strengthened glass compared to the types of conventional glass that Craver teaches. Further, Applicants pointed out, in the context of the amended claims submitted in this paper, that the glass positioned to be in contact with the hot atmosphere of the stove, oven etc, is contrary to the teachings in the cited prior art.

Forker's invention relates to improvements in the manufacturing of automotive glass (see col. 1, line 62 to col. 2, line 4). While it is true that Craver in col. 5, suggests that "**conventional** tempered or silica sand glass" is useful to incorporate into his particularized firebox door assembly, the inclusion of tempered glass in Craver is not sufficient motivation to look to automotive glass as in Forker. More specifically, Forker's is not a conventional tempered or silica sand glass because Forker's glass contains a high amount of alumina, and is a soda-alumina-silica glass (see col. 5 line 35). A conventional tempered glass is a soda-lime glass typically including less than 1% alumina, which is not to be confused with Forker's. During the aforementioned discussion, the Examiner asserted that because Foker's glass was available at the time of Craver, Forker's glass is considered to be a type of "conventional" glass as mentioned in Craver. While Applicants disagree for the reasons already discussed, there are further reasons why this rejection should not be sustained.

The Examiner states that "Craver teaches that panes in such doors are advantageously made from strengthened glass" (Action at page 3, citing the abstract and column 5, lines 30-34). However, Craver includes no such teachings. While in column 5, lines 30-34, Craver mentions "heat resistant glass" (for the inner pane), which is not necessarily tempered, and a conventional tempered or silica sand plate glass for the outer pane, this description is very general and covers every type of glass. There would have been no reason for the one to choose the glass of Forker in the application of Craver.

Moreover, the claimed chemically tempered glass is defined in the claims as the pane of glass that is in direct contact with the hot atmosphere that would be present in the cooker, stove, etc and in the embodiments where two panes of glass are present, the glass in the claims is the inner pane, directly in contact with the hot atmosphere. This is the contrary to Craver's teachings who suggest a tempered glass only as the outer pane. As the outerpane, the glass would not contact with a hot atmosphere, e.g., ranging from 300 to 530°C as defined in

dependent claims 49-51. One would not place such a tempered glass as inner plate because as taught in the present specification, “thermally or chemically toughened glasses provide good mechanical strength but they are reputed to rapidly relax, which means that the advantage afforded by the toughening is too quickly lost on account of the intended applications.” (see page 1 lines 27-30). However, the inventors have discovered that if the glass as defined in the claims is indeed positioned to be in contact with the hot atmosphere, it performs exceptionally well. Indeed, this is so shown in the comparative data presented in the specification, see Table 1, where a comparison is made to a conventional strengthened glass (“Planilux”). More specifically, the data (starting at page 7) compare three different glasses whereby the glass when chemically treated for an extended period of time and which has unique strain point and interdiffusion coefficients performed significantly better in the tests provided in Examples 1 and 2 (pages 9-10 of the application) when compared to a conventional strengthened glass (“Planilux”), see Table 1. This conventional Planilux glass is the type of soda-lime glass that Craver suggests and the strain point of a soda-lime glass is 514°C comparable to the strain point of the Planilux glass and well under the lower limit of strain point defined in the present claims (at least 550°C).

As is shown by the data in the application, the conventional soda-lime glass, of the type suggested by Craver glass performed poorly when compared to the particular strengthened glass as defined in the present claims shown in the results of table 3 (see line “CS77” compared to Planilux).


In view of the above discussion, the amended claims and consideration of the evidence presented in the specification, withdrawal of the rejection is requested.

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A Notice of Allowance for all pending claims is requested.

Respectfully submitted,

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